

# Carter-Burgess

PROJECT SH-128  
CLIENT CDOT Region 6  
SUBJECT Detention on Wadsworth

JOB NO.		NO.  OF
DESIGNED BY <u>MEB</u>	DATE <u>11/27/07</u>	
CHECKED BY	DATE	

## WQCV

$$A = 33.4 \text{ AC}$$

$$I = 39\% \text{ (interim conditions)}$$

$$WQCV = (0.91)(0.39)^3 - (1.19)(0.39)^2 + (0.78)(0.39) = 0.18 \text{ watershed inches}$$

$$\text{Required Storage} = \left[ \frac{WQCV}{12} \right] (\text{Area}) = \left[ \frac{0.18 \text{ inches}}{12 \text{ in/ft}} \right] (33.4 \text{ AC}) = \underline{\underline{0.5 \text{ AC-ft}}}$$

40-hour drain time

$$I = 70\% \text{ (ultimate conditions)}$$

$$WQCV = (0.91)(0.70)^3 - (1.19)(0.70)^2 + (0.78)(0.70) = 0.28 \text{ watershed inches}$$

$$\text{Required Storage} = \left[ \frac{0.28 \text{ inches}}{12 \text{ in/ft}} \right] (33.4 \text{ AC}) = \underline{\underline{0.77 \text{ AC-ft}}}$$